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REVIEW OF THE 1993-1995 UPPER COOK INLET COMMERCIAL SALMON FISHERIES, REPORT TO THE ALASKA BOARD OF FISHERIES

By

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INTRODUCTION

The Upper Cook Inlet fisheries management area consists of that portion of Cook Inlet north of the latitude of Anchor Point. The area currently supports commercial fisheries for salmon, herring and razor clams. The salmon fishery targets primarily on sockeye salmon and produces approximately five percent of the statewide salmon harvest. A minor herring fishery, presently closed to rebuild depressed stocks, for both sac roe and bait has contributed less than one percent to the total Alaska harvest while the razor clam harvest annually comprises about sixty percent of the state's production.

Upper Cook Inlet is divided into two districts (Central and Northern) which are further divided into numerous subdistricts (Figure 1). Five species of Pacific salmon are harvested in significant numbers in Upper Cook Inlet as they migrate to their streams of origin. The river systems responsible for the majority of salmon production include the Kenai River, Kasilof River, Susitna River and Crescent River. Run timing characteristics and migration routes utilized by various species and stocks are such that the commercial harvest is largely mixed-stock and mixed-species in nature.

With one minor exception, gill nets are the only legal gear for harvesting salmon in Upper Cook Inlet. Set gill nets (approximately 750 permits) are employed around virtually the entire perimeter of the inlet while drift gill nets (approximately 585 permits) are used principally in the offshore areas of the Central District. Seine gear is permitted only in the Chinitna Bay Subdistrict and only by emergency order. Base fishing time for all gear types and areas is two twelve-hour periods (Mondays and Fridays, 7:00 a.m. to 7:00 p.m.) weekly.

Commercial harvest records exist for Cook Inlet back to 1893, although separate catch records for Upper and Lower Cook Inlet are available only back to 1954 (Table 1). Historically, set gill nets and traps were the only gear employed in the Upper Cook Inlet fishery. The use of drift gill nets did not become widespread until the early 50's. Since then their use has expanded steadily and this gear type now accounts for about 60 percent of the annual salmon harvest (Appendix A.1-6). Traps were outlawed at statehood.

In terms of economic value, sockeye salmon are by far the most important species, generally representing over 80 percent of the exvessel value of the annual salmon catch. The economic significance of the remaining species varies with their respective abundance.

REGULATION CHANGES TAKING EFFECT WITH THE 1993 SEASON

The Alaska Board of Fisheries, meeting in Anchorage in November, 1992, adopted a number of regulation changes that took effect beginning with the 1993 fishing season: (1) The Board adopted the Department's recommendation to allow commercial herring fishing in any part of Upper Cook Inlet only by emergency order. Due to the depressed state of Upper Cook Inlet herring stocks, no fishery was anticipated for at least several years. (2) The Board made several

amendments to the Big River Sockeye Salmon Management Plan. The season opening date was changed from May 25 to June 1. Fishing was allowed each Monday, Wednesday and Friday through June 24 or until 1,000 chinook salmon were estimated to have been harvested or conservation concerns for either sockeye or chinook salmon caused a reduction in fishing periods by emergency order. The maximum mesh size of gill nets was increased to 5 1/2 inches. The "no net may be fished seaward of another net" provision was eliminated. The closed waters description for this fishery was amended to read as follows: those waters within one statute mile of the high water terminus of Kustatan and Drift Rivers, within 500 yards of the high water terminus of Bachatna and Montana Bill Creeks, within one statute mile of Big River or in the freshwater portions of any anadromous fish stream. The wording regarding Big River was constructed to prevent fishing within one mile of the mouth of Big River at any tidal stage. As the mouth of the river changes with the tide, the one mile protected area will move with the river mouth. (3) A Packers Creek Sockeye Salmon Management Plan was adopted that limited fishing time in the Kalgin Island Subdistrict directed at harvesting surpluses of Packers Creek sockeye salmon to no more than one additional 12-hour fishing period a week. (4) All references to Susitna River chinook salmon in the Upper Cook Inlet Salmon Management Plan were changed to read "Northern District chinook salmon". Fishing time in the Northern District after August 15 was limited to a maximum of the regular Monday and Friday fishing periods. (5) The closed waters area at the Kenai River mouth was redefined to prohibit the use of drift gill nets inside of the set nets closest to the river. (6) Set net buoy stickers would no longer be required for any area except the Upper Subdistrict of the Central District (the east side set nets). (7) All set net fishermen were required to register prior to fishing for one of three areas of Cook Inlet: the Upper Subdistrict of the Central District, the Northern District, or all remaining areas of Cook Inlet. Once registered for one of these three areas, fishermen could fish only in the area for which they are registered for the remainder of the year. No transfers are permitted. The Fish Creek fishery in Knik Arm is exempt from the registration restrictions - fishermen registered in any area of Cook Inlet may participate in the Knik Arm fishery. (8) Drift gillnetting after August 15 would now be permitted only in the Kustatan, Western and Chinitna Bay Subdistricts and within one mile of the western shoreline in the Lower Subdistrict. (9) Beginning June 25, closed waters in that area along the west side of Cook Inlet from the northern boundary of the Central District south to Harriet Point would be as follows: those waters within one statute mile of the terminus, at mean high water, of the Kustatan, Drift, and Big rivers, or within 500 yards of the terminus, at mean high water, of all other anadromous streams, or within 900 feet of the stream bed or channel of an anadromous fish stream throughout the intertidal portion of that stream out to the mean lower low water mark.

REVIEW OF THE 1993, 1994 AND 1995 COMMERCIAL SALMON FISHERIES

The 1993 commercial harvest of 5.3 million salmon in Upper Cook Inlet was above the long-term average catch of 4 million but a severe drop from the record harvest of 10.6 million set the previous year. The harvest was valued at approximately $29.9 million, a 70% drop from 1992 (Table 2).

The 1994 harvest of 5.0 million salmon was somewhat above the long-term average and down just slightly from the previous year's catch. The harvest was valued at $34.4 million.

The 1995 commercial harvest of 4.1 million salmon in Upper Cook Inlet was just slightly above the long-term average. The harvest was valued at approximately $22 million, about two-thirds the value of the previous year and the lowest value since 1991.

Sockeye Salmon

The 1993 commercial sockeye salmon harvest of 4.8 million fish was the seventh highest on record but only half of the preceding year's catch and approximately double the long-term average. Valued at $28 million, the sockeye salmon harvest comprised 93.6% of the value of the total commercial salmon fishery. The distribution of the catch between drift gear (54%) and set net gear (46%) differed only slightly from the long-term average (58% drift).

The harvest of 3.6 million sockeye salmon in 1994 was the tenth highest on record and approximately 50% above the long-term average. The sockeye catch was valued at $29.4 million or 85.5% of the value of the total salmon fishery. Drift gill net gear accounted for 53% of the catch with set gear taking 47%.

The 1995 sockeye salmon harvest of 2.95 million was well above the long-term average but the third lowest catch since 1981. Valued at $19.2 million, the sockeye salmon harvest comprised 87% of the value of the total commercial salmon fishery. The distribution of the catch between drift gear (60.3%) and set net gear (39.7%) differed only slightly from the long-term average (57.6% drift).

Management of the Upper Cook Inlet sockeye salmon fishery integrates information received from a variety of programs which together provide an in-season model of the actual return. These programs include offshore test fishing, escapement enumeration by sonar and weir, comparative analysis of historic commercial harvest and effort levels, and age composition studies. In addition, newly developed programs are beginning to provide useful information with one program utilizing sonar to estimate the abundance of salmon in the Central District and another program using genetic differences between stocks of sockeye salmon to estimate the relative contribution by stock to commercial catches. At present, both new programs provide limited information inseason.

The offshore test fishing program employs a chartered gill net vessel fishing standardized stations along a transect crossing Cook Inlet from Anchor Point to the Red River delta. The program provides an in-season estimation of sockeye salmon run-strength by determining fish passage rates (computed by correlating the vessel's daily catch with subsequent commercial harvests and escapement) and fitting these rates to the appropriate historic run-timing profile.

Hydroacoustic devices to quantify salmon escapement into glacial rivers were first employed in Upper Cook Inlet in the Kenai and Kasilof rivers in 1968, expanded to the Susitna River in 1978 and the Crescent River in 1979 (Table 3). The Susitna River escapement is monitored by sonar in the Yentna River tributary only due to technical problems with obtaining satisfactory estimates within the mainstem Susitna. The Yentna River escapement goal of 100,000 to 150,000 sockeye salmon was established based on the historical proportion of the total Susitna River escapement utilizing this tributary. Weirs placed on Fish Creek and Packers Creek provide daily escapement counts for those systems.

Upper Cook Inlet commercial catch statistics refined to gear type, area and date are available back to 1966. Availability of these statistics in a computerized database format make them extremely valuable for evaluating in-season fishery performance.

Inseason determination of the age composition of sockeye salmon entering the principal rivers frequently provides information helpful in estimating the stock contributions in various fisheries.

Upper Cook Inlet's commercial sockeye salmon fishery consists of several identifiable component fisheries with the principal component being the July harvest of mixed returns to the Kenai, Kasilof and Susitna Rivers and chiefly involving the drift gill net fishery, the Central District east side set nets and the set net fishery in the Northern District. Peripheral fisheries include the set net harvest of Big River sockeye in June, additional focused set net harvest of Fish Creek sockeye in Knik Arm in late July, and the Western Subdistrict set net fishery targeting the Crescent River run throughout July.

The Big River fishery in the Kustatan Subdistrict was established by the Board starting with the 1989 season under a separate management plan and was designed to provide for a commercial harvest of an early return of sockeye that had previously had only minimal exploitation. The management plan was substantially altered by the Board following the 1992 season. These alterations all worked much as envisioned. The incidental chinook harvest, capped at 1,000 fish, dropped significantly from levels chronically near the cap to an average of just over 300. The drop can be attributed to the delay in the start of the season from May 25 to June 1, adoption of area registration by the Board that limited participation to local fishermen more interested in the long-term future of this fishery and also to reduced strength of the chinook returns passing through this area. Sockeye catches for the 1993-95 period ranged from the highest on record for this fishery (15,193 in 1993) to the lowest (3,124 in 1994).

A set gill net fishery operating under a separate management plan was authorized by the Board beginning in 1987 in the waters of Knik Arm at the northern extreme of the Upper Cook Inlet management area. The fishery was created to allow greater harvest of the hatchery-augmented return of sockeye salmon to Fish Creek. Beginning with the 1991 season the fishery was altered to include an earlier ending date (July 26 rather than July 29) and changed from a continuously open fishery when the escapement goal appeared to be assured to twice weekly fishing periods beginning July 15. These changes were made to reduce the harvest of incidentally taken coho salmon while maintaining a reasonably effective sockeye harvest. Sockeye catches during the

last three seasons have varied considerably, ranging from a near-record 47,751 in 1993 to a record low 7,528 in 1994. Fish arrived in the area early and in extremely large numbers in 1993 while poor juvenile production from the parent-year of the 1994 return prompted closure of all but a single period. Coho salmon catches varied somewhat but were consistently well below the level observed under the original structure of the fishery. Despite the targeted commercial fishery and an intense personal use dip net fishery within the creek, escapements of sockeye in all years were far in excess of the goal.

While run-timing of sockeye salmon bound for Crescent River is similar to other major stocks, the location of the river in the southwestern portion of the Central District leads to a more isolated harvest and allows for a more focused single-stock management approach. In general, fishery adjustments based on Crescent River sockeye are confined to the Western Subdistrict set net fishery. After a number of years of record-level production through the mid-1980's, the Crescent River run has taken a severe downturn for unknown reasons. The period from 1993-1995 saw consistently poor returns requiring closure of the set net fishery for extended periods of time. When even this action proved inadequate for achieving desired escapement levels, management measures taken in 1995 were expanded into a significant portion of the drift fishery (closing the southwest corner of the Central District) and were successful in meeting the escapement goal.

The preseason forecast for the 1993 sockeye harvest was 2.5 million, far below the 1992 harvest, and based largely on expected diminished returns to the Kenai River. When drift catches prior to mid-July indicated the Kenai run was considerably above forecast levels, management concerns were focused primarily on assuring that adequate numbers of sockeye were passed through the commercial fishery to achieve the Yentna River goal. To achieve this, a drift period scheduled for July 9 was essentially closed, a drift period on July 16 was restricted to the lower 40% of the Central District and a Northern District set net period on July 23 was closed. The Yentna River escapement totaled nearly 142,000, near the upper end of the desired range. The drift restrictions inevitably resulted in large surpluses of Kenai-bound fish reaching the east side beaches and many extra hours of fishing time were opened for the east side set nets and for drifting confined to within three miles of the east side beach. The Kenai sonar count of 814,000 exceeded the 700,000 fish upper end of the desired range. The Kasilof River count of 150,000 matched the lower end of goal range.

The 1994 sockeye salmon harvest was forecast to be 2.0 million, again due to expected diminished returns to the Kenai River. Management measures followed a pattern similar to the previous year with the drift period scheduled for July 11 closed to provide for reduced exploitation of Susitna-bound sockeye, the July 18 period restricted to the southern half of the Central District for the same reason, and the July 22 period closed in drift fishery, the Northern District set net fishery and most of the east side set net fishery to reduce harvest of both Susitna and Kenai sockeye where escapement was lagging. As escapement improved, first in the Kenai and followed by the Susitna, an additional drift period was permitted on July 27 and an additional set net period in the Northern District on August 3. As the Kenai River quickly achieved its' escapement goal, considerable amounts of additional fishing time was permitted in the east side

set net fishery and for drifting in the east corridor. A two-day hiatus in this fishing at the direction of the Commissioner of ADF&G resulted in the peak of Kenai River sonar count occurring on August 2, by far the latest on record, and greatly contributed to the final count of 1,003,000, well in excess of the goal. The Yentna River count totaled 128,000 or near the middle of the goal range while the Kasilof River count of 205,000 also fell in the middle of the desired range. The season's catch of 3.6 million nearly doubled the preseason forecast.

With a preseason forecast of 2.7 million sockeye, the management outlook for the 1995 season again included a limited drift fishery to reduce Susitna sockeye exploitation and dealing with resulting Kenai and Kasilof River surpluses along the Central District east side. Accordingly, the drift period scheduled for July 14 was restricted to the eastside corridor (given the date, essentially a closure) and the Northern District set net period on July 24 was closed when adequate Yentna escapement appeared uncertain. Substantial additional fishing time was permitted for the east side set nets, first for the southern inshore nets to harvest Kasilof-bound fish and later for all gear including the drift corridor. Escapements for all systems were well within desired ranges. The season's harvest of 2.95 million fish was just slightly above the forecast.

Chum Salmon

Chum salmon returning to Upper Cook Inlet are bound principally for the Susitna River with much smaller returns bound for a number of other Northern District streams and along the west side of the Central District. The harvest occurs primarily in the drift fishery (87%), the Northern District set net fishery (6%) and the Central District west side set net fishery (6%). The timing of the Susitna River return significantly overlaps the timing of the sockeye salmon returns and as a result, management measures directed at sockeye salmon often influence the chum salmon harvest. The Susitna River chum salmon escapement is not measured and no escapement objectives are defined.

The 1993-95 harvests of 123,000, 300,000 and 530,000 chum salmon ranged from one of the poorest harvests on record to just slightly below average. Upper Cook Inlet's chum salmon stocks are following a pattern of recent reduced productivity common to most other Southcentral stocks. The poor catches combined with very low prices resulted in exvessel values averaging less than 3% of the total value of the fishery. While no emergency order actions taken in the commercial fishery were solely directed at chum salmon, they frequently played a role in formulating the overall harvest strategy used in the drift fishery. The current low value of chum salmon offers a strong financial disincentive for fishermen who might otherwise have expended effort on this species. Generally, when chum salmon concentrations are encountered, fishermen quickly move to areas offering a better mix of more valuable sockeye salmon. Where drift gillnetters frequently fished the late season primarily for chum salmon, currently effort drops to very low levels after the sockeye run is complete and remaining fishermen focus efforts on local coho salmon stocks along the west side of the Central District. While no means exists to enumerate escapement of the main populations of chum salmon, indicators such as the Yentna

River fishwheel index, Little Susitna River weir counts, and the relative measure of passage provided by the magnitude of the Northern District set net fishery harvest all point to somewhat reduced but still substantial numbers of chum salmon reaching freshwater.

Pink Salmon

Returns to the Susitna and Kenai Rivers combine to account for the majority of the pink salmon production in Upper Cook Inlet. Both rivers have abundant returns only in even-numbered years. Susitna pink salmon return first, passing through the Central District during the latter half of July while Kenai-bound pink salmon are most abundant in the Central District in early August. The harvest occurs principally in the drift fishery (39%), the Central District east side set net fishery (35%) and the Northern District set net fishery (22%).

The Susitna pink salmon return overlaps the sockeye salmon return to such a large degree that harvest levels are often influenced by management measures directed at sockeye salmon. Specific fishery alterations directed at Susitna River pink salmon are uncommon. Kenai River pink salmon are harvested most heavily in the Central District east side set fishery beginning in early August. Fishing time in this area after early August is typically controlled by the relative strength of the pink salmon return. Estimating the escapement of pink salmon has not proven practical in either system and specific escapement objectives do not exist.

The 1994 pink salmon return produced a harvest of 520,000 fish, about half the long-term average for an even-numbered year, and with a price of just $.12 per pound, accounted for only 0.7% of the value of the salmon fishery. The Susitna River pink salmon run was apparently damaged by the severe flooding of the drainage in the fall of 1986 and that factor combined with environmental conditions that have lead to poor pink salmon production throughout much of southcentral Alaska have substantially reduced the Susitna River return. A complete lack of directed effort to harvest Susitna-bound pink salmon has thus far obviated any need for specific fishery restrictions. The escapement in 1994 was subjectively judged to be poor.

The 1994 Kenai River pink salmon return, as indicated by daily harvest levels in the eastside set net fishery, was also below average, although not as poor as the Susitna return. Lack of substantial effort following the sockeye salmon return resulted in an escapement level that appeared to be fair to good.

Coho Salmon

For discussion purposes, it is useful to divide Upper Cook Inlet's diverse coho salmon stocks impacted by the commercial fishery into three broad categories. The first category contains those stocks bound principally for the Susitna River, migrating through the Central District during the last three weeks of July. The Cook Inlet Salmon Management Plan identifies Susitna River coho salmon as a stock which should have a minimized commercial interception, to the extent

consistent with other goals established within the plan. While simple in concept, this directive is much more difficult to implement in practice. The management plan identifies a higher priority for the sustained commercial harvest of sockeye, chum and pink salmon stocks, many of which are bound for the same streams at similar times and along similar pathways utilized by Susitna River coho salmon stocks. Consequently, these stocks are normally exploited at fairly significant levels in the commercial drift and the Northern District set net fisheries. It is occasionally possible to time fishery closures aimed principally at stock conservation of sockeye salmon to take advantage of peaks in abundance of coho salmon but such opportunities arise too infrequently to consistently advance the plan's objectives.

The second category of interest is the early return of coho salmon to the Kenai River which peaks in abundance in early August and is intercepted in both the drift and east side set net fisheries. The allocation status is the same as for Susitna coho salmon. Due to the overlap with the Kenai River sockeye salmon return, it is difficult to avoid a substantial interception of this stock in the commercial fishery.

The third stock grouping consists of a diverse collection of coho salmon returns to the numerous streams along the west side of Cook Inlet and Northern District streams other than the Susitna River. Under the management plan, these stocks are managed primarily for commercial uses although fishing time in the Northern District is restricted to only regular fishing periods after August 15 to limit the harvest of coho. Fishing time in the west side set net fisheries after mid-August is based primarily on the strength of local coho returns.

The 1993-1995 commercial coho salmon harvests ranged from slightly below average (307,000 in 1993) to well above average (581,000 in 1994) and accounted for approximately 6% of the value of the total salmon harvest. Susitna River freshwater abundance was not directly measured but appeared to range from fair (1994) to excellent (1995). Little Susitna weir counts ranged from 14,296 (1995) to 34,884 (1993). The subjectively-judged abundance of early run Kenai River coho appeared to be in the fair to good range for all three years. The Central District west side coho salmon returns were generally average to above average and fishing in these areas generally produced average catches.

Chinook Salmon

The principal stocks of chinook salmon harvested in the commercial fishery are the return to the Susitna River and the late run to the Kenai River. Created by the Board in 1986 and conducted under the direction of the Northern District Chinook Salmon Management Plan, a minor fishery occurs each June for set gill nets in the Northern District. Each participant is allowed one 35-fathom net and a minimum distance of 1200 feet must be maintained between nets (twice the normal distance). Fishing is permitted for 6 hours each Monday in June until the quota of 12,500 chinook has been harvested or the regular season opens on June 25.

The 1993 Northern District chinook salmon fishery harvested 3,042 chinook salmon, the lowest catch since the inception of the fishery. The principle reason for the reduced harvest was the significantly reduced run-strength of chinook salmon as evidenced by reduced abundance in many rivers and tributaries. The 1994 fishery harvested 3,006 chinook salmon, again largely due to poor run strength. Coupled with widespread sport fishery restrictions, the Northern District commercial fishery was closed for the final scheduled period on June 20. The 1995 fishery, in tandem with further restrictions of the recreational fishery, was limited to a single fishing period on June 5 and produced a catch of 3,837 chinook salmon.

The other major stock of chinook salmon harvested in the commercial fishery, the late run to the Kenai River, generates the greatest controversy in Upper Cook Inlet, pitting Kenai River recreational anglers against Upper Subdistrict ("east side") set netters. The commercial set net fishery catches frequently exceed the sport fish harvest while much smaller numbers are taken in the drift gill net fishery.

The 1993, 1994 and 1995 seasons produced above-average chinook catches in the east side set net fishery of 13,977, 15,885 and 12,302 respectively, due in part to the fairly intense fishing directed at surpluses of Kenai and Kasilof River sockeye salmon and also due to strong chinook returns. Annual total returns of late run chinook during these seasons were measured at 68,000, 72,000 and 60,000, all well above average. The estimated spawning escapements of 34,032, 38,549 and 33,899 were all well above the optimum level of 22,300.

OUTLOOK

The forecasted total return of sockeye salmon to Upper Cook Inlet for 1996 is 4.8 million fish with an expected harvest of 3.3 million, a modest increase over 1995. The total run forecast is comprised of the following components: Crescent River - 144,000, Fish Creek - 233,000, Kasilof River - 650,000, Kenai River 2,517,000, Packers Creek - 117,000, Susitna River - 491,000 and remaining minor systems - 622,000. The projected harvests of other species includes 15,000 chinook, 400,000 coho, 600,000 pink and 350,000 chum salmon.

Table 1. Upper Cook Inlet commercial salmon harvest by species, 1954-1995.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1954	63,780	1,207,046	321,525	2,189,207	510,068	4,291,626
1955	45,926	1,027,528	170,777	101,680	248,343	1,594,254
1956	64,977	1,258,789	198,189	1,595,375	782,051	3,899,381
1957	42,158	643,712	125,434	21,228	1,001,470	1,834,002
1958	22,727	477,392	239,765	1,648,548	471,697	2,860,129
1959	32,651	612,676	106,312	12,527	300,319	1,064,485
1960	27,512	923,314	311,461	1,411,605	659,997	3,333,889
1961	19,737	1,162,303	117,778	34,017	349,628	1,683,463
1962	20,210	1,147,573	350,324	2,711,689	970,582	5,200,378
1963	17,536	942,980	197,140	30,436	387,027	1,575,119
1964	4,531	970,055	452,654	3,231,961	1,079,084	5,738,285
1965	9,741	1,412,350	153,619	23,963	316,444	1,916,117
1966	8,544	1,852,114	289,837	2,005,745	532,756	4,688,996
1967	7,859	1,380,062	177,729	32,229	296,837	1,894,716
1968	4,536	1,104,904	469,850	2,278,197	1,119,114	4,976,601
1969	12,397	692,175	100,777	33,383	269,847	1,108,579
1970	8,336	732,605	275,399	814,895	776,229	2,607,464
1971	19,765	636,303	100,636	35,624	327,029	1,119,357
1972	16,086	879,824	80,933	628,574	630,103	2,235,520
1973	5,194	670,098	104,420	326,184	667,573	1,773,469
1974	6,596	497,185	200,125	483,730	396,840	1,584,476
1975	4,787	684,752	227,379	336,333	951,796	2,205,047
1976	10,865	1,664,150	208,695	1,256,728	469,802	3,610,240
1977	14,790	2,052,291	192,599	553,855	1,233,722	4,047,257
1978	17,299	2,621,421	219,193	1,688,442	571,779	5,118,134
1979	13,738	924,415	265,166	72,982	650,357	1,926,658
1980	13,798	1,573,597	271,418	1,786,430	390,675	4,035,918
1981	12,240	1,439,277	484,411	127,164	833,542	2,896,634
1982	20,870	3,259,864	793,937	790,648	1,433,866	6,299,185
1983	20,634	5,049,733	516,322	70,327	1,114,858	6,771,874
1984	10,062	2,106,714	449,993	617,452	680,726	3,864,947
1985	24,088	4,060,429	667,213	87,828	772,849	5,612,407
1986	39,240	4,787,982	756,830	1,299,360	1,134,173	8,017,585
1987	39,661	9,500,186	451,404	109,801	349,139	10,450,191
1988	29,060	6,834,342	560,022	469,972	708,573	8,601,969
1989	26,742	5,010,698	339,201	67,430	122,027	5,566,098
1990	16,105	3,604,064	500,634	603,630	351,197	5,075,630
1991	13,535	2,177,576	425,724	14,663	280,223	2,911,721
1992	17,171	9,108,340	468,911	695,859	274,303	10,564,584
1993	18,719	4,754,698	306,822	100,918	122,767	5,303,924
1994	20,260	3,567,392	580,567	520,481	299,300	4,988,000
1995	17,857	2,951,827	446,954	133,575	529,422	4,079,635
Average	20,531	2,332,494	325,669	739,397	604,003	4,022,094

Table 2. Approximate exvessel value of the Upper Cook Inlet commercial salmon harvest by species, 1960-1995.

Year	Chinook	%	Sockeye	%	Coho	%	Pink	%	Chum	%	Total
1960	$140,000	5.0	$1,334,000	47.9	$307,000	11.0	$663,000	23.8	$343,000	12.3	$2,787,000
1961	$100,000	4.7	$1,687,000	79.4	$118,000	5.6	$16,000	0.8	$204,000	9.6	$2,125,000
1962	$100,000	2.5	$1,683,000	42.3	$342,000	8.6	$1,274,000	32.0	$582,000	14.6	$3,981,000
1963	$89,000	4.6	$1,388,000	72.3	$193,000	10.1	$13,000	0.7	$236,000	12.3	$1,919,000
1964	$20,000	0.5	$1,430,000	38.9	$451,000	12.3	$1,131,000	30.8	$646,000	17.6	$3,678,000
1965	$50,000	2.0	$2,099,000	82.1	$109,000	4.3	$70,000	2.7	$230,000	9.0	$2,558,000
1966	$50,000	1.2	$2,727,000	64.4	$295,000	7.0	$823,000	19.4	$338,000	8.0	$4,233,000
1967	$49,000	1.9	$2,135,000	82.6	$187,000	7.2	$13,000	0.5	$202,000	7.8	$2,586,000
1968	$30,000	0.7	$1,758,000	40.4	$515,000	11.8	$1,209,000	27.8	$843,000	19.4	$4,355,000
1969	$70,000	4.3	$1,231,000	75.2	$109,000	6.7	$23,000	1.4	$204,000	12.5	$1,637,000
1970	$49,000	1.8	$1,135,000	42.5	$354,000	13.3	$387,000	14.5	$745,000	27.9	$2,670,000
1971	$189,000	10.7	$1,102,000	62.2	$143,000	8.1	$22,000	1.2	$316,000	17.8	$1,772,000
1972	$217,000	6.3	$1,795,000	52.0	$135,000	3.9	$473,000	13.7	$834,000	24.1	$3,454,000
1973	$122,000	2.0	$3,214,000	52.2	$320,000	5.2	$363,000	5.9	$2,134,000	34.7	$6,153,000
1974	$210,000	3.2	$3,058,000	46.5	$843,000	12.8	$946,000	14.4	$1,521,000	23.1	$6,578,000
1975	$65,000	1.0	$2,596,000	39.0	$821,000	12.3	$423,000	6.4	$2,753,000	41.3	$6,658,000
1976	$276,000	2.0	$8,626,000	63.2	$818,000	6.0	$1,879,000	13.8	$2,040,000	15.0	$13,639,000
1977	$525,000	2.4	$13,274,000	61.8	$933,000	4.3	$772,000	3.6	$5,991,000	27.9	$21,495,000
1978	$667,000	2.0	$26,128,000	80.3	$1,388,000	4.3	$2,154,000	6.6	$2,217,000	6.8	$32,554,000
1979	$625,000	4.3	$8,094,000	55.2	$1,658,000	11.3	$89,000	0.6	$4,201,000	28.6	$14,667,000
1980	$417,000	3.2	$7,932,000	61.6	$902,000	7.0	$2,114,000	16.4	$1,516,000	11.8	$12,881,000
1981	$422,000	2.6	$11,071,000	67.9	$2,638,000	16.2	$179,000	1.1	$2,005,000	12.3	$16,315,000
1982	$753,000	2.1	$25,029,000	69.0	$4,139,000	11.4	$515,000	1.4	$5,851,000	16.1	$36,287,000
1983	$585,000	2.0	$23,841,000	81.5	$1,603,000	5.5	$38,000	0.1	$3,195,000	10.9	$29,262,000
1984	$311,990	1.8	$12,445,633	71.8	$2,041,480	11.8	$522,419	3.0	$2,007,827	11.6	$17,329,349
1985	$799,173	2.3	$27,479,840	80.0	$3,358,083	9.8	$57,440	0.2	$2,646,553	7.7	$34,341,089
1986	$881,356	1.9	$37,665,832	83.3	$2,838,881	6.3	$698,527	1.5	$3,123,485	6.9	$45,208,081
1987	$1,609,681	1.6	$96,331,886	94.9	$2,368,968	2.3	$84,547	0.1	$1,115,477	1.1	$101,510,559
1988	$1,204,321	1.0	$111,102,230	91.2	$4,731,340	3.9	$6[illegible]309	0.5	$4,113,356	3.4	$121,801,556
1989	$803,494	1.4	$56,194,753	95.0	$1,674,393	2.8	$86,012	0.1	$415,535	0.7	$59,174,187
1990	$436,822	1.1	$35,804,485	88.0	$2,419,202	5.3	$512,590	1.3	$1,495,827	3.7	$40,668,906
1991	$348,553	2.3	$12,259,753	80.4	$1,996,348	13.1	$5,472	0.0	$643,392	4.2	$15,253,518
1992	$634,383	0.6	$96,038,337	96.0	$2,262,323	2.3	$404,990	0.4	$740,618	0.7	$100,080,651
1993	$462,819	1.5	$27,969,409	93.6	$1,081,175	3.6	$36,935	0.1	$322,205	1.1	$29,872,543
1994	$642,242	1.9	$29,432,768	85.5	$3,297,621	9.6	$240,462	0.7	$830,857	2.4	$34,443,950
1995	$474,460	2.2	$19,179,496	87.1	$1,295,273	5.9	$53,056	0.2	$1,023,479	4.6	$22,025,764

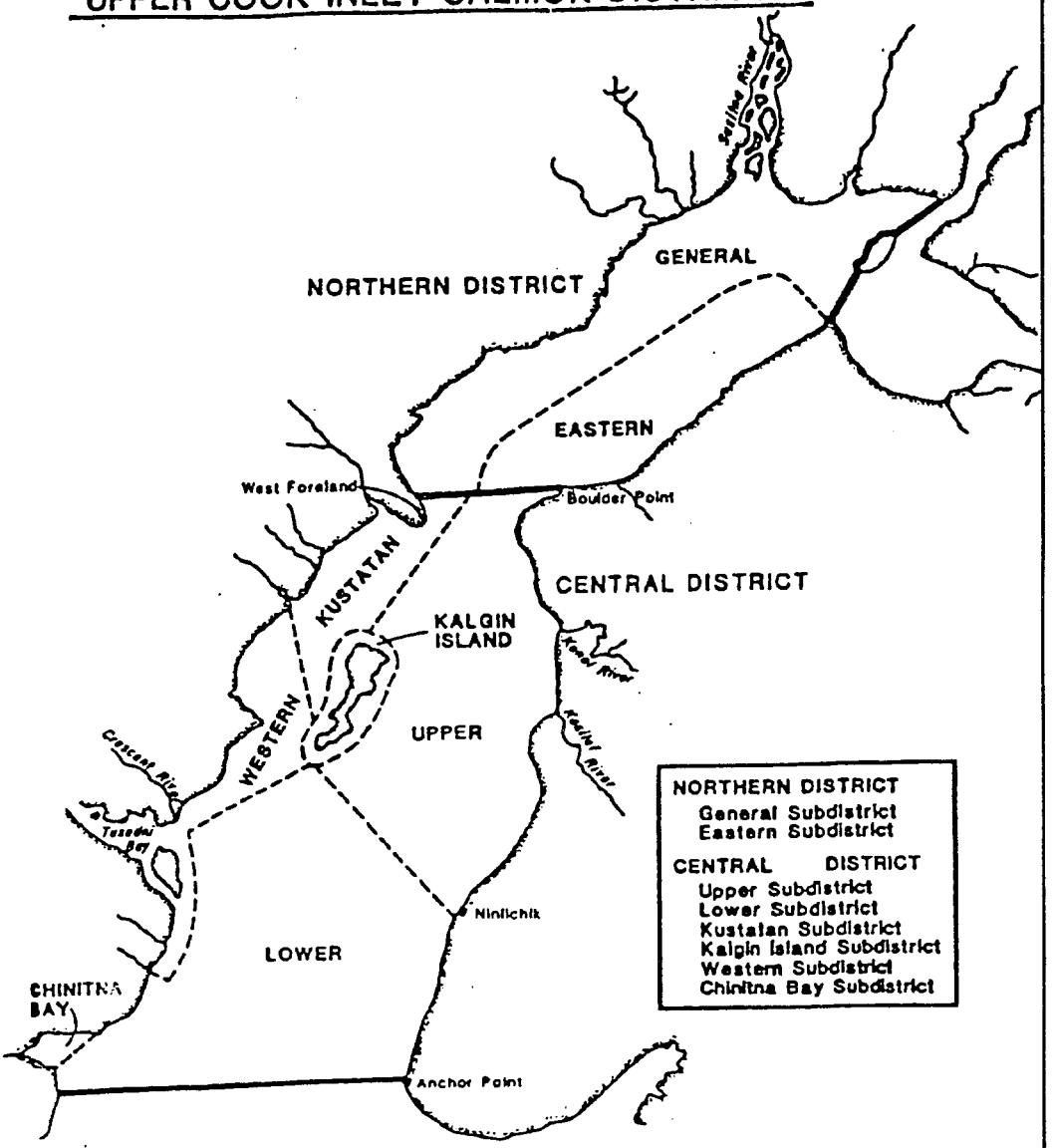
Table 3. Enumeration goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1968-1995.

	Kenai River		Kasilof River		Fish Creek	
Year	Enumeration Goal	Enumeration Estimate[1]	Enumeration Goal	Enumeration Estimate[1]	Enumeration Goal	Enumeration Estimate[2]
1968	0	88,000	0	93,000	0	19,616
1969	150,000	53,000	75,000	46,000	0	12,456
1970	150,000	73,000	75,000	37,000	0	25,000
1971	150,000	--	75,000	--	0	31,900
1972	150,000-250,000	318,000	75,000-150,000	112,000	0	6,981
1973	150,000-250,000	367,000	75,000-150,000	40,000	0	2,705
1974	150,000-250,000	161,000	75,000-150,000	64,000	0	16,225
1975	150,000-250,000	142,000	75,000-150,000	48,000	0	29,882
1976	150,000-250,000	380,000	75,000-150,000	140,000	0	14,032
1977	150,000-250,000	708,000	75,000-150,000	155,000	0	5,183
1978	350,000-500,000	399,000	75,000-150,000	117,000	0	3,555
1979	350,000-500,000	285,000	75,000-150,000	152,000	0	68,739
1980	350,000-500,000	464,000	75,000-150,000	187,000	0	62,828
1981	350,000-500,000	408,000	75,000-150,000	257,000	0	50,479
1982	350,000-500,000	620,000	75,000-150,000	180,000	50,000	28,164
1983	350,000-500,000	630,000	75,000-150,000	210,000	50,000	118,797
1984	350,000-500,000	345,000	75,000-150,000	232,000	50,000	192,352
1985	350,000-500,000	501,000	75,000-150,000	503,000	50,000	68,577
1986	350,000-500,000	501,000	150,000-250,000	276,000	50,000	29,800
1987	400,000-700,000	1,597,000	150,000-250,000	249,000	50,000	91,215
1988	400,000-700,000	1,021,500	150,000-250,000	202,000	50,000	71,603
1989	400,000-700,000	1,599,959	150,000-250,000	158,206	50,000	67,224
1990	400,000-700,000	658,908	150,000-250,000	144,289	50,000	50,000
1991	400,000-700,000	645,000	150,000-250,000	238,000	50,000	50,500
1992	400,000-700,000	994,760	150,000-250,000	183,178	50,000	71,385
1993	400,000-700,000	813,617	150,000-250,000	149,939	50,000	117,619
1994	400,000-700,000	1,003,446	150,000-250,000	205,117	50,000	95,107
1995	450,000-700,000	628,760	150,000-250,000	205,902	50,000	115,000

	Susitna River		Crescent River		Packers Creek	
Year	Enumeration Goal	Enumeration Estimate[1]	Enumeration Goal	Enumeration Estimate[1]	Enumeration Goal	Enumeration Estimate[2]
1978	200,000	94,000	0	N/C	0	N/C
1979	200,000	157,000	50,000	87,000	0	N/C
1980	200,000	191,000	50,000	91,000	0	16,477
1981	200,000	340,000	50,000	41,000	0	13,024
1982	200,000	216,000[3]	50,000	59,000	0	15,687
1983	200,000	112,000[4]	50,000	92,000	0	18,403
1984	200,000	194,000[5]	50,000	118,000	0	30,684
1985	200,000	228,000[5]	50,000	129,000	0	36,850
1986	100,000-150,000[6]	92,000[6]	50,000-100,000	N/A	0	29,604
1987	100,000-150,000[6]	66,000[6]	50,000-100,000	119,000	0	35,401
1988	100,000-150,000[6]	52,347[6]	50,000-100,000	57,716	15,000-25,000	18,607
1989	100,000-150,000[6]	96,269[6]	50,000-100,000	71,064	15,000-25,000	22,304
1990	100,000-150,000[6]	140,379[6]	50,000-100,000	52,180	15,000-25,000	31,868
1991	100,000-150,000[6]	105,000[6]	50,000-100,000	44,500	15,000-25,000	41,275
1992	100,000-150,000[6]	66,057[6]	50,000-100,000	58,227	15,000-25,000	28,361
1993	100,000-150,000[6]	141,694[6]	50,000-100,000	37,556	15,000-25,000	40,869
1994	100,000-150,000[6]	128,032[6]	50,000-100,000	30,355	15,000-25,000	30,788
1995	100,000-150,000[6]	121,479[6]	50,000-100,000	52,250	15,000-25,000	29,473

[1] Derived from sonar counters unless otherwise noted.
[2] Weir counts.
[3] Poor field conditions make this a minimum estimate: mark/recapture estimate from Su-Hydro studies was 265,000.
[4] Minimum estimate. Combining Yentna sonar with Sunshine Station mark/recapture estimate yields 176,000.
[5] Yentna River sonar count combined with Sunshine Station mark/recapture estimate.
[6] Yentna River only.

Figure 1.


UPPER COOK INLET SALMON DISTRICTS
NORTHERN DISTRICT
GENERAL
EASTERN
West Foreland
Boulder Point
CENTRAL DISTRICT
KUSTATAN
KALGIN ISLAND
WESTERN
UPPER
LOWER
Ninilchik
CHINITNA BAY
Anchor Point
NORTHERN DISTRICT
General Subdistrict
Eastern Subdistrict
CENTRAL DISTRICT
Upper Subdistrict
Lower Subdistrict
Kustatan Subdistrict
Kalgin Island Subdistrict
Western Subdistrict
Chinitna Bay Subdistrict

Appendix A.1. Upper Cook Inlet commercial chinook salmon harvest by gear type and area, 1966-1995.

	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
			East Side		Kalgin/West Side				
Year	Number	%	Number	%	Number	%	Number	%	Total
1966	392	4.6	7,329	85.8	401	4.7	422	4.9	8,544
1967	489	6.3	6,646	85.0	500	6.4	184	2.4	7,819
1968	182	4.0	3,304	72.8	579	12.8	471	10.4	4,536
1969	362	2.9	5,834	47.1	3,286	26.5	2,904	23.4	12,386
1970	367	4.4	5,366	64.3	1,152	13.8	1,460	17.5	8,345
1971	237	1.2	7,055	35.7	2,875	14.5	9,598	48.6	19,765
1972	375	2.3	8,599	53.5	2,199	13.7	4,913	30.5	16,086
1973	244	4.7	4,411	84.9	369	7.1	170	3.3	5,194
1974	422	6.4	5,571	84.5	434	6.6	169	2.6	6,596
1975	250	5.2	3,675	76.8	733	15.3	129	2.7	4,787
1976	690	6.4	8,249	75.9	1,469	13.5	457	4.2	10,865
1977	3,411	23.1	9,732	65.8	1,084	7.3	565	3.8	14,792
1978	2,072	12.0	12,468	72.1	2,093	12.1	666	3.8	17,299
1979	1,089	7.9	8,671	63.1	2,264	16.5	1,714	12.5	13,738
1980	889	6.4	9,643	69.9	2,273	16.5	993	7.2	13,798
1981	2,320	19.0	8,358	68.3	837	6.8	725	5.9	12,240
1982	1,293	6.2	13,658	65.4	3,203	15.3	2,716	13.0	20,870
1983	1,125	5.5	15,043	72.9	3,534	17.1	933	4.5	20,635
1984	1,377	13.7	6,165	61.3	1,516	15.1	1,004	10.0	10,062
1985	2,048	8.5	17,723	73.6	2,427	10.1	1,890	7.8	24,088
1986	1,834	4.7	19,810	50.5	2,108	5.4	15,488	39.5	39,240
1987	4,552	11.5	21,379	53.9	1,029	2.6	12,701	32.0	39,661
1988	2,217	7.6	12,870	44.3	1,137	3.9	12,836	44.2	29,060
1989	0	0.0	10,919	40.8	3,092	11.6	12,731	47.6	26,742
1990	621	3.9	4,139	25.7	1,763	10.9	9,582	59.5	16,105
1991	241	1.8	4,891	36.1	1,544	11.4	6,859	50.7	13,535
1992	615	3.6	10,718	62.4	1,284	7.5	4,554	26.5	17,171
1993	746	4.0	13,977	74.7	719	3.8	3,277	17.5	18,719
1994	460	2.3	15,885	78.4	730	3.6	3,185	15.7	20,260
1995	594	3.3	12,032	67.4	1,101	6.2	4,130	23.1	17,857
*Average	1,087	6.8	9,766	61.0	1,539	9.6	3,610	22.6	16,002

* Does not include 1989.

Appendix A.2. Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966-1995.

	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
			East Side		Kalgin/West Side				
Year	Number	%	Number	%	Number	%	Number	%	Total
1966	1,103,261	59.6	485,330	26.2	132,443	7.2	131,080	7.1	1,852,114
1967	890,152	64.6	303,858	22.0	66,414	4.8	118,065	8.6	1,378,489
1968	561,737	50.8	317,535	28.7	85,049	7.7	140,575	12.7	1,104,896
1969	371,747	53.7	210,834	30.5	71,184	10.3	38,050	5.5	691,815
1970	460,690	62.9	142,701	19.5	62,723	8.6	66,458	9.1	732,572
1971	423,107	66.5	111,505	17.5	61,144	9.6	40,533	6.4	636,289
1972	506,281	57.5	204,599	23.3	83,176	9.5	85,755	9.7	879,811
1973	375,695	56.1	188,816	28.2	59,973	8.9	45,614	6.8	670,098
1974	265,771	53.5	136,889	27.5	52,962	10.7	41,563	8.4	497,185
1975	368,124	53.8	177,336	25.9	73,765	10.8	65,526	9.6	684,751
1976	1,055,786	63.4	476,376	28.6	62,338	3.7	69,649	4.2	1,664,149
1977	1,073,098	52.3	751,178	36.6	104,265	5.1	123,780	6.0	2,052,321
1978	1,803,479	68.8	660,797	25.2	105,767	4.0	51,378	2.0	2,621,421
1979	454,707	49.1	248,359	26.8	108,422	11.7	113,918	12.3	925,406
1980	770,247	48.9	559,812	35.6	137,882	8.8	105,647	6.7	1,573,588
1981	633,380	44.0	496,003	34.5	60,217	4.2	249,662	17.3	1,439,262
1982	2,103,429	64.5	971,423	29.8	66,952	2.1	118,060	3.6	3,259,864
1983	3,222,428	63.8	1,508,511	29.9	134,575	2.7	184,219	3.6	5,049,733
1984	1,235,337	58.6	490,273	23.3	162,139	7.7	218,965	10.4	2,106,714
1985	2,032,957	50.1	1,561,200	38.4	285,081	7.0	181,191	4.5	4,060,429
1986	2,834,534	59.2	1,657,904	34.6	153,714	3.2	141,830	3.0	4,787,982
1987	5,631,746	59.3	3,495,802	36.8	208,036	2.2	164,602	1.7	9,500,186
1988	4,129,878	60.4	2,428,597	35.5	146,154	2.1	129,713	1.9	6,834,342
1989	3	0.0	4,543,066	90.7	186,828	3.7	280,801	5.6	5,010,698
1990	2,305,742	64.0	1,116,975	31.0	84,949	2.4	96,398	2.7	3,604,064
1991	1,117,514	51.3	844,156	38.8	99,705	4.6	116,201	5.3	2,177,576
1992	6,069,495	66.6	2,838,076	31.2	131,291	1.4	69,478	0.8	9,108,340
1993	2,558,492	53.8	1,941,706	40.8	108,181	2.3	146,319	3.1	4,754,698
1994	1,878,463	52.7	1,482,957	41.6	85,830	2.4	120,142	3.4	3,567,392
1995	1,773,873	60.3	961,216	32.7	96,735	3.3	109,098	3.7	2,940,922
*Average	1,655,557	57.6	923,128	33.5	106,588	5.9	113,223	6.4	2,798,497

* Does not include 1989.

Appendix A.3. Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966-1995.

	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
			East Side		Kalgin/West Side				
Year	Number	%	Number	%	Number	%	Number	%	Total
1966	80,901	27.9	68,877	23.8	59,509	20.5	80,550	27.8	289,837
1967	53,071	29.9	40,738	22.9	40,066	22.5	43,854	24.7	177,729
1968	167,383	35.8	80,828	17.3	63,301	13.5	156,648	33.5	468,160
1969	33,053	32.8	18,988	18.9	28,231	28.0	20,425	20.3	100,697
1970	114,070	40.9	30,114	10.8	52,299	18.7	82,722	29.6	279,205
1971	35,491	35.4	16,589	16.5	26,188	26.1	22,094	22.0	100,362
1972	21,577	26.7	24,673	30.5	15,300	18.9	19,346	23.9	80,896
1973	31,784	30.4	23,901	22.9	24,784	23.7	23,951	22.9	104,420
1974	75,640	37.8	36,837	18.4	40,610	20.3	47,038	23.5	200,125
1975	88,579	40.0	46,209	20.9	53,537	24.2	33,051	14.9	221,376
1976	80,712	38.7	47,873	22.9	42,243	20.2	37,835	18.1	208,663
1977	110,184	57.2	23,693	12.3	38,093	19.8	20,623	10.7	192,593
1978	76,259	34.8	34,134	15.6	61,711	28.2	47,089	21.5	219,193
1979	114,496	43.2	29,284	11.0	68,306	25.8	53,078	20.0	265,164
1980	89,510	33.0	40,281	14.8	51,527	19.0	90,098	33.2	271,416
1981	226,366	46.6	36,024	7.4	88,390	18.2	134,625	27.7	485,405
1982	416,274	52.5	108,393	13.7	182,205	23.0	85,352	10.8	792,224
1983	326,965	63.3	37,694	7.3	97,796	18.9	53,867	10.4	516,322
1984	213,423	47.4	37,166	8.3	84,618	18.8	114,786	25.5	449,993
1985	357,388	53.6	70,657	10.6	147,331	22.1	91,837	13.8	667,213
1986	506,405	66.9	76,385	10.1	85,932	11.4	88,108	11.6	756,830
1987	202,306	44.8	74,977	16.6	74,930	16.6	98,920	21.9	451,404
1988	277,703	49.6	55,419	9.9	77,058	13.8	149,742	26.7	560,022
1989	743	0.2	81,744	24.1	81,004	23.9	175,710	51.8	339,201
1990	247,453	49.4	40,351	8.1	73,429	14.7	139,401	27.8	500,634
1991	175,504	41.2	30,435	7.1	87,515	20.6	132,270	31.1	425,724
1992	267,300	57.0	57,078	12.2	53,400	11.4	91,133	19.4	468,911
1993	121,828	39.7	43,075	14.0	35,661	11.6	106,258	34.6	306,822
1994	306,217	52.7	69,281	11.9	61,005	10.5	144,064	24.8	580,567
1995	241,473	54.0	44,750	10.0	71,431	16.0	89,300	20.0	446,954
*Average	174,459	47.8	46,369	12.7	65,048	17.8	79,244	21.7	365,133

* Does not include 1989.

Appendix A.4. Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966-1995.

	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
			East Side		Kalgin/West Side				
Year	Number	%	Number	%	Number	%	Number	%	Total
1966	593,654	29.6	969,624	48.3	70,507	3.5	371,960	18.5	2,005,745
1967	7,475	23.3	12,900	40.2	3,256	10.1	8,460	26.4	32,091
1968	880,512	38.7	785,887	34.5	75,755	3.3	534,839	23.5	2,276,993
1969	8,233	25.3	10,968	33.7	5,711	17.6	7,587	23.3	32,499
1970	334,737	41.1	281,067	34.5	24,763	3.0	174,193	21.4	814,760
1971	6,433	18.1	18,097	50.8	2,637	7.4	8,423	23.7	35,590
1972	115,117	18.3	403,706	64.2	18,913	3.0	90,830	14.5	628,566
1973	91,901	28.2	80,596	24.7	16,437	5.0	137,250	42.1	326,184
1974	140,432	29.0	291,408	60.2	9,014	1.9	42,876	8.9	483,730
1975	113,868	33.9	112,423	33.4	19,086	5.7	90,953	27.0	336,330
1976	599,594	47.7	479,024	38.1	30,030	2.4	148,080	11.8	1,256,728
1977	286,308	51.7	125,817	22.7	25,212	4.6	116,518	21.0	553,855
1978	934,442	55.3	372,601	22.1	54,785	3.2	326,614	19.3	1,688,442
1979	19,554	26.8	19,983	27.4	7,061	9.7	26,382	36.1	72,980
1980	964,526	54.0	299,444	16.8	47,963	2.7	474,488	26.6	1,786,421
1981	53,888	42.4	15,654	12.3	4,276	3.4	53,325	41.9	127,143
1982	270,380	34.2	432,715	54.7	14,242	1.8	73,307	9.3	790,644
1983	26,629	37.9	18,309	26.0	3,785	5.4	21,604	30.7	70,327
1984	273,565	44.3	220,895	35.8	16,708	2.7	106,284	17.2	617,452
1985	34,228	39.0	17,715	20.2	5,653	6.4	30,232	34.4	87,828
1986	614,453	47.3	530,445	40.8	15,460	1.2	139,002	10.7	1,299,360
1987	38,660	35.2	47,707	43.4	5,229	4.8	18,205	16.6	109,801
1988	226,776	48.3	179,092	38.1	9,890	2.1	54,210	11.5	469,968
1989	1	0.0	37,971	56.3	5,580	8.3	23,878	35.4	67,430
1990	323,955	53.7	225,429	37.3	10,302	1.7	43,944	7.3	603,630
1991	5,791	39.5	2,670	18.2	1,049	7.2	5,153	35.1	14,663
1992	423,738	60.9	244,068	35.1	4,248	0.6	23,805	3.4	695,859
1993	46,457	46.0	41,674	41.3	2,313	2.3	10,468	10.4	100,918
1994	251,602	48.3	236,582	45.5	3,116	0.6	29,181	5.6	520,481
1995	64,632	48.4	53,420	40.0	3,810	2.9	11,713	8.8	133,575
*Average	267,294	43.1	225,170	36.3	17,628	2.8	109,651	17.7	619,744

* Does not include 1989.

Appendix A.5. Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966-1995.

	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
			East Side		Kalgin/West Side				
Year	Number	%	Number	%	Number	%	Number	%	Total
1966	424,972	79.8	7,461	1.4	64,725	12.1	35,598	6.7	532,756
1967	233,041	78.5	399	0.1	25,013	8.4	38,384	12.9	296,837
1968	1,022,900	90.7	1,563	0.1	44,986	4.0	58,454	5.2	1,127,903
1969	238,497	89.1	399	0.1	16,954	6.3	11,836	4.4	267,686
1970	678,448	90.4	1,228	0.2	48,591	6.5	22,507	3.0	750,774
1971	274,567	84.8	128	0.0	32,647	10.1	16,603	5.1	323,945
1972	564,726	90.2	1,727	0.3	40,179	6.4	19,780	3.2	626,412
1973	605,738	90.7	1,965	0.3	29,019	4.3	30,851	4.6	667,573
1974	344,496	86.8	506	0.1	15,346	3.9	36,492	9.2	396,840
1975	886,474	93.2	980	0.1	33,347	3.5	30,787	3.2	951,588
1976	405,769	86.5	1,484	0.3	47,882	10.2	14,045	3.0	469,180
1977	1,153,454	93.5	1,413	0.1	54,708	4.4	23,861	1.9	1,233,436
1978	489,119	85.5	4,563	0.8	40,946	7.2	37,151	6.5	571,779
1979	609,239	93.8	867	0.1	30,342	4.7	9,310	1.4	649,758
1980	339,970	87.7	2,147	0.6	28,970	7.5	16,728	4.3	387,815
1981	756,922	91.0	2,386	0.3	26,461	3.2	46,208	5.6	831,977
1982	1,348,510	94.1	4,777	0.3	36,647	2.6	43,006	3.0	1,432,940
1983	1,044,636	93.7	2,822	0.3	38,079	3.4	29,321	2.6	1,114,858
1984	568,097	83.5	3,695	0.5	34,207	5.0	74,727	11.0	680,726
1985	700,848	90.7	4,133	0.5	31,746	4.1	36,122	4.7	772,849
1986	1,012,028	89.2	7,027	0.6	39,078	3.4	76,040	6.7	1,134,173
1987	211,580	60.6	16,608	4.8	53,558	15.3	67,180	19.3	348,926
1988	580,650	81.9	11,841	1.7	40,354	5.7	75,728	10.7	708,573
1989	72	0.1	12,302	10.1	27,705	22.7	81,948	67.2	122,027
1990	289,521	82.4	4,611	1.3	21,355	6.1	35,710	10.2	351,197
1991	215,469	76.9	2,387	0.9	22,974	8.2	39,393	14.1	280,223
1992	232,955	84.9	2,867	1.0	13,180	4.8	25,301	9.2	274,303
1993	88,823	72.4	2,977	2.4	5,566	4.5	25,401	20.7	122,767
1994	245,854	82.1	2,944	1.0	10,443	3.5	40,059	13.4	299,300
1995	468,224	88.4	3,711	0.7	13,820	2.6	43,667	8.2	529,422
*Average	542,966	88.5	3,276	0.5	31,716	5.2	35,329	5.8	613,287

* Does not include 1989.